IMPACT OF MANAGED CARE ON QUALITY, ACCESS AND COST FINDINGS

I. INTRODUCTION

Early signs of managed care have existed in California for decades. However, managed care has grown faster and farther in recent years, causing rapid change in the areas of quality, access, and cost. Much of this change has been good and necessary. Change, however, is never comfortable for those who experience it. In addition, some of the changes caused by managed care are (or just as importantly are perceived as) negative.

II. IMPACT OF MANAGED CARE ON QUALITY

Quality has been defined variously by different individuals and organizations.[1] Some define quality in terms of the outcomes that quality care should efficiently and effectively provide. Others have simply defined quality as "doing the right thing right." Though not current and not entirely specific to California and therefore difficult to draw conclusions from with certainty, the best scientifically valid and available evidence suggests that HMOs have improved quality in several areas, but that there are also some areas of concern. Patients and providers (e.g., doctors and other appropropriately-licensed health professionals operating within their scope of practice) alike are concerned that certain aspects of quality have suffered as a result of managed care.

According to available research, there is no "winner" between HMOs and indemnity plans. Certain empirical studies have demonstrated that quality of care under HMOs is often found to be the same or better; others suggest that care has been worse.[2] In addition, managed care and indemnity are not monoliths. Each consists of high, medium, and low quality organizations and individual providers. Nor should the results of studies related to HMOs be generalized to all forms of managed care, which include preferred provider organizations that often have much in common with indemnity plans. Several studies point to specific areas of quality concerns in HMOs including the chronically ill elderly and chronically ill poor,[3] shorter lengths of stay,[4] and detection and treatment of mental health.[5,6] Most studies of customer satisfaction of the insured adult population conclude that Americans are general satisfied with their health care coverage and the quality of their care, regardless of type of plan.[7,8,9,10] However, there is variation in satisfaction

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[1] Blumenthal D, "Part 1: Quality of Care–What Is It?," *The New England Journal of Medicine*, 335:12, September 19, 1996, 891-4.

[2] Miller R and Luft H, "Does Managed Care Lead to Better or Worse Quality of Care?," *Health Affairs*, 16:5, September/October 1997, 7-25.

[3] Ware J, et al., "Differences in 4-Year Health Outcomes for Elderly and Poor, Chronically Ill Patients Treated in HMO and Fee-for-Service Systems: Results From the Medical Outcomes Study," *JAMA*, 276:13, October 2, 1996, 1039-47.

[4] Gazmararian J, Koplan J, "Length-Of-Stay After Delivery: Managed Care Versus Fee-For-Service," *Health Affairs*, 15:4, Winter 1996, 74-80.

[5] Wells K, Sturm R, "Care for Depression in a Changing Environment," *Health Affairs*, 14:3, Fall 1995, 78-89.

[6] Wells K, Hays R, Burnam M, Rogers W, Greenfield S, Ware J, "Detection of Depressive Disorder for Patients Receiving Prepaid or Fee-for-Service Care: Results From the Medical Outcomes Study," *JAMA*, 262:23, December 15, 1989, 3298-3302.

[7] Donelan K, "What Patients *Really* Think of Managed Care," *Managed Care*, February 1996, 17-24.

[8] "Public Opinion of Health Plans Up," Health Market, September 29, 1997, XIV:15, p1.

among plans within plan model types, and for some populations and some measures satisfaction is lower (See also Task Force paper on Observations of Public Perceptions).

Several quality-enhancing activities are associated with managing care. They include: quality measurement, quality improvement, process improvement, provider profiling and publishing provider outcomes measures, continuity and coordination of care, disease management, prevention and health promotion, early diagnosis, reduction in treatment variation, concentration of volume sensitive procedures in high volume centers, and rewarding quality. Many of these activities have been driven by purchasers and not the organizations themselves. Not all managed care organizations have embraced them or embraced them all. None of these activities are sufficient in and of themselves, but must work together with other elements to improve quality.

III. IMPACT OF MANAGED CARE ON ACCESS

Access is a multi-faceted issue, and the story of access under managed care is one of trade-offs. HMOs have generally improved financial access to insurance and care. Lower HMO premiums mean more people can afford coverage.[11] Modest copayments and no deductibles make care at the point-of-service for those covered generally more affordable. In addition, HMOs provide access to certain benefits, such as pharmaceuticals, that were not typically covered benefits in unmanaged products.

Despite lower overall costs generally and the lower proportion of total health care costs born by consumers, some consumers perceive their costs going up because their employers have shifted responsibility for additional costs to them directly.[12] In fact, employer-paid benefits come out of employees' total compensation, at least in the long-run, but this is an economic principle that consumers do not generally recognize.[13] While employee out-of-pocket costs have increased, these cost increases would likely have been greater in the absence of managed care.

The flip-side of greater financial access is tighter restrictions on access to providers and services. Because HMOs require lower cost-sharing in general than non-HMOs demand for services increases, requiring HMOs to restrict services based on need in order to control costs. Closed-end HMOs restrict choice of providers to those within their networks. At-risk HMOs and their contracted medical groups and IPAs also apply greater restrictions on access to providers and services as they attempt to manage utilization and prevent unnecessary care. According to some, additional access concerns under managed care include formulary restrictions,[14] mental health

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[9] Pacific Business Group on Health (PBGH), *California Consumer HealthScope*, 1997.
[10] "Health Care in California", Study #361, *Los Angeles Times*, June 1995.
[11] Shiels J and Haught R, "Managed Care Savings for Employers and Households: Impact on the Number of Uninsured," study for the American Association of Health Plans, June 18, 1997.
[12] Tannenbaum J, "Health Costs at Small and Midsize Firms Decline," *The Wall Street Journal*, September 11, 1997, B2.
[13] Fuchs V, "It's Not Employers Who Bear the Costs," *Los Angeles Times*, September 21, 1993, B7.
[14] "Joint Oversight Hearing on the Regulation of Pharmaceutical Benefit Managers (PBMs): Current Trends, Future Options," Senate Committee on Insurance and Conference Committee on AB 1136, February 7, 1996; and Keating P, "Why You May Be Getting The Wrong Medicine," *Money*, June 1997, 142-57.

services restrictions,[15] and lack of insurance coverage in rural areas.[16,17] Enrollees of managed care plans, especially vulnerable populations, also report greater unmet medical needs than in unmanaged plans.[18,19,20]

IV. IMPACT OF MANAGED CARE ON COST

Driven by purchasers, competition, and threat of legislation, managed care has slowed the rise in health insurance costs.[21] Nationally, costs of employer-sponsored premiums increased by 11.5% overall in 1991. Increases fell steadily to a 0.5% increase in 1996, with a slight upturn in 1997 to a 2.1% increase, about the rate of inflation.[22] Recent reports suggest that premium prices are expected to increase more in 1998, though less so in California than elsewhere.[23]

According to HMO self-reported data, average premiums in California increased for families by 17.3% and 6.6% for individuals in 1992 (See Figure 1).[24] Since then, premiums have increased at a much lower rate or decreased through 1996. Since 1992, year-to-year changes in average premiums have been better than the national average (See Figure 1). In addition, with increased managed care enrollment, all sectors in California for which data is available also show reductions in the rate of premium growth (See Figures 2-5).

A 1997 study by The Lewin Group estimated the amount of savings resulting from managed care.[25] Based on their own and more conservative CBO assumptions, the Lewin Group found that total national savings attributable to managed care in 1996 was between $23.8 and $37.4 billion. Total savings over the 1990 to 1996 period were between $116 and $181 billion. For California, savings in 1996 were between $5.5 and $8.6 billion or between 15% and 23% of total premiums. Total savings over the 1990 to 1996 period were between $28.4 and $44.3 billion.

Information about the cost structure underlying insurance premiums suggests that California generally has a lower cost structure than the nation on average (See Figure 6). Variations in utilization of hospital days and visits among California medical groups may suggest continued

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[15] Boyle P and Callahan D, "Managed Care and Mental Health: The Ethical Issues," *Health Affairs*, 14:3, Fall 1995, 7-22.
[16] Ricketts T, Slifkin R, Johnson-Webb K, "Patterns of Health Maintenance Organization Service Areas in Rural Counties," *Health Care Financing Review*, 17:1, Fall 1995, 99-113.
[17] Serrato C, Brown R, Bergeron J, "Why Do So Few HMOs Offer Medicare Risk Plans in Rural Areas?" *Health Care Financing Review*, 17:1, Fall 1995, 85-97.
[18] Mark T, Mueller C, "Access To Care In HMOs And Traditional Insurance Plans," *Health Affairs*, 15:4, Winter 1996, 81-7.
[19] Donelan K, Blendon R, et al., "All Payer, Single Payer, Managed Care, No Payer: Patients' Perspectives in Three Nations," *Health Affairs*, 15:2, Summer 1996, 254-65.
[20] Nelson L, et al., "Access To Care In Medicare HMOs, 1996," *Health Affairs*, 16:2, March/April 1997, 148-56.
[21] Congressional Budget Office, "Trends in Health Care Spending by the Private Sector," April 1997.
[22] *Health Benefits in 1997*, KPMG Peat Marwick LLP, October 1996, Tysons Corner, VA.
[23] Kilborn P, "Analysts Expect Health Premiums to Rise Sharply," *The New York Times*, October 19, 1997, A1.
[24] Premiums are weighted by HMO size. California to national comparison does not account for differences in benefits packages, however, year to year changes provide some historical adjustment. Hoechst Marion Roussel, *HMO-PPO Digest*, 1992-1997.
[25] Sheils J and Haught R, "Managed Care Savings for Employers and Households: 1990 through 2000," *The Lewin Group*, prepared for the American Association of Health Plans, May 23, 1997.

room for improvement. According to medical group data, the least efficient medical group typically uses twice the resources of the most efficient medical group (See Figure 6). Improvement in the least efficient groups could reduce costs considerably. Further improvement, however, may not be easy. Efforts such as fall prevention and disease management require sophisticated team-based care management that is not well-developed in all HMO model types.

Managed care may also impact important non-economic factors such as uncompensated care and emerging clinical research which should also be considered in an evaluation of impact on costs. However, no empirical evidence is available in these areas.

IMPACT OF MANAGED CARE ON QUALITY, ACCESS AND COST BACKGROUND PAPER

I. INTRODUCTION

Early signs of managed care have existed in California for decades. However, managed care has grown faster and farther in recent years, causing rapid change in the areas of quality, access, and cost. Much of this change has been good and necessary. Change, however, is never comfortable for those who experience it. In addition, some of the changes caused by managed care are (or just as importantly are perceived as) negative.

II. IMPACT OF MANAGED CARE ON QUALITY

Quality has been defined variously by different individuals and organizations.[26] Some define quality in terms of the outcomes that quality care should efficiently and effectively provide. Others have simply defined quality as "doing the right thing right." Some have focused on the service aspect of quality, stressing the need to satisfy patients and other customers. Managed care has had positive and negative impacts on quality. Though not current and not entirely specific to California, the best scientifically valid and available evidence suggests that HMOs have improved quality in several areas, but that there are also some areas of concern.

A. Perceived Problems

While perceptions do not constitute evidence in the same way as results of well-designed, statistically-valid, population-based studies, they are important, and they shape the policy debate. Below are generalizations about perceived problems with the quality of the current health care delivery system. (See also Task Force paper on Observations of Public Perceptions.)

Patient Concerns

Patients want providers (i.e., doctors and other appropriately licensed health professionals operating within their scope of practice) to make decisions based on clinical rather than financial criteria. Some believe that HMOs reduce utilization by inappropriately discharging hospital patients early, and denying expensive tests and treatments.[27] Same-day mastectomy patients may feel traumatized about emptying drain tubes at home, and new mothers discharged early may feel unequipped to care for their new baby while recovering from childbirth.[28,29] While there is little evidence demonstrating any compromise to medical quality in these cases, patients perceive a decline in service quality as a result of these earlier discharges. The popular press reports that mental health patients are approved for fewer visits in less aggressive settings without regard to quality in a managed care environment,[30] and that some patients committed suicide after a health plan denied inpatient care.[31] This is not an exhaustive list.

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[26] Op Cit, Blumenthal D, "Part 1: Quality of Care–What Is It?"

[27] Goldberg R, "What's Happened to the Healing Process?" *Wall Street Journal*, June 18, 1997.

[28] Same-day mastectomies are not mainly an HMO invention; they were developed and introduced in an indemnity, academic setting at Johns Hopkins University. Miller S, "Johns Hopkins offers outpatient mastectomies, hysterectomies," *Warfield's Business Record*, 8:40:1, October 1, 1993, p16.

[29] Philp T, "Piecemeal HMO Reforms Miss Doctors' Expanded Role," *Sacramento Bee*, May 19, 1997.

[30] Op Cit, Boyle PJ, Callahan D, "Managed Care in Mental Health: The Ethical Issues."

[31] Consumers Union of U.S., Inc., "How Good Is Your Health Plan? Part One of a Two-part Report," *Consumer*

Provider Concerns

Some providers are concerned that HMOs sacrifice quality to reduce costs.[32] Some believe that HMOs and providers in managed care operate under perverse incentives that result in denial of care. Providers are also concerned about low medical loss ratios (the proportion of revenue spent on medical care relative to that spent on overhead, administration and profits).[33] Some providers believe that HMOs reduce access to expensive care so that more people can receive basic care.[34] Some mental health professionals believe that non-psychiatric physician gatekeepers lack mental health expertise, and non-clinicians should not manage mental health utilization.[35] This is not an exhaustive list.

B. Quality of Managed Care

While assessing quality of managed care against objective criteria, such as the Healthy People 2000 goals, is an appropriate evaluation for the health care system, it is less helpful in assessing the impact or change in quality due to managed care. To measure the change requires a baseline or point of comparison. Making a comparison between managed and unmanaged care is necessary because HMOs have been accused of compromising quality by reducing tests and procedures to enhance the bottom-line. The majority of research efforts designed to examine the impact of managed care on quality have compared managed care organizations (specifically HMOs) to unmanaged organizations (specifically traditional, unmanaged fee-for-service indemnity ("indemnity") plans).

The most scientifically valid and available research on the impact of managed care on quality is often not current and often not specific to California. Interpretation of the results presented in this paper should recognize that significant change that is likely to have had some affect on quality of care has continued, including lower rates of premium and spending growth as well as major organizational and clinical practice changes.[36] In addition, drawing conclusions for California based on national studies may not be appropriate.

According to available research, there is no "winner" between HMOs and indemnity plans. Certain empirical studies have demonstrated that quality of care under HMOs is often found to be the same or better; others suggest that care has been worse. In addition, managed care and indemnity are not monoliths. Each consists of high, medium, and low quality organizations and individual providers. Nor should the results of studies related to HMOs be generalized to all forms of managed care, which include preferred provider organizations that often have much in common with indemnity plans.

Reports, August 1996.

[32] Blumenthal D, "Part 4: The Origins of the Quality-of-Care Debate," *The New England Journal of Medicine*, 335:15, October 10, 1996, 1146-9.

[33] Council on Ethical and Judicial Affairs, American Medical Association, "Ethical Issues in Managed Care," *JAMA*, 273:4, January 25, 1995, 330-5.

[34] Op Cit, Blumenthal D, "Part 1: Quality of Care – What Is It?"

[35] Durham M, "Can HMOs Manage The Mental Health Benefit?" *Health Affairs*, 14:3, Fall 1995, 116-23.

[36] Op Cit, Miller R and Luft H, "Does Managed Care Lead to Better or Worse Quality of Care?"

Medical Outcomes

Miller/Luft Literature Reviews. Professors Robert Miller and Harold Luft of UCSF concluded from an extensive literature review that there were equal numbers of statistically significant positive and negative "quality" results for HMO plans and non-HMO plans.[37] The study found that HMOs produce better, the same or worse quality of care results depending on the particular organization and disease.[38] The study compiled previous studies comparing HMOs to indemnity in peer-reviewed journals published after October 1993, with ending dates of 1985 or later and some attempt to risk-adjust.

In a previous similar study, Miller and Luft also found roughly comparable quality; 14 of 17 observations showed better or equivalent quality in HMOs; however, two observations showed lower quality in HMOs for mental health problems.[39] In addition, results varied widely among HMOs because each HMOs is different. Industry-sponsored studies corroborate Miller and Luft's results.[40,41]

Other Outcomes Studies. Several other studies that have been published in peer reviewed journals or by a federal government agency show that some dimensions of quality of care for HMO patients are equal to or better than that given to indemnity patients. For example, results of various cancer studies suggest HMOs do more extensive cancer screening,[42] detect cancer earlier,[43] and have survival rates equal to or better than indemnity.[44] Studies have similarly documented positive findings regarding heart disease,[45] diabetes and hypertension,[46] rheumatoid arthritis,[47] and appendicitis,[48] as well as among different settings and patient populations.[49]

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[37] Op Cit, Miller R and Luft H, "Does Managed Care Lead to Better or Worse Quality of Care?"

[38] Testimony from Robert H. Miller to the Managed Health Care Improvement Task Force, San Francisco, CA, July 11, 1997.

[39] Miller R and Luft H, "Managed Care Plan Performance Since 1980: A Literature Analysis," *JAMA*, 372:19, May 18, 1994, 1512-19.

[40] American Association of Health Plans, "Research Highlights: Quality of Care and Health Plans," May 12, 1997.

[41] Meisel J, "Quality of Care in HMOs: A Review of the Literature," Report for the California Association of HMOs, Sacramento, CA, September 1994.

[42] Makuc, et al., *CDC/NCHS Advance Data No. 254*, August 1994; Bernstein, et al., "Differences in Rates of Cancer Screening by Usual Source of Medical Care," *Medical Care*, 29:3, March 1991, 196-209; Nelson, et al., *Physician Payment Review Commission*, November 1996.

[43] Riley, et al., "Stage of Cancer at Diagnosis for Medicare HMO and Fee-for-Service Enrollees," *American Journal of Public Health*, 84:10, October 1994, 1598-1604.

[44] Vernon, et al., "Quality of Care for Colorectal Cancer in a Fee-for-Service and Health Maintenance Organization Practice," *Cancer*, 69:10, May 15, 1992, 2418-25; and Greenwald H, Henke C, "HMO Membership, Treatment, And Mortality Risk Among Prostatic Cancer Patients," *American Journal of Public Health*, 82:8, August 1992, 1099-1104.

[45] Langa K, Sussman E, "The Effect Of Cost-Containment Policies On Rates Of Coronary Revascularization In California," *The New England Journal of Medicine*, 329:24, December 9, 1993, 1784-9.; and Carlisle, et al., *American Journal of Public Health*, 82:12, December 1992, 1626-30.

[46] Greenfield S, et al., "Outcomes Of Patients With Hypertension And Non-Insulin Dependent Diabetes Mellitus Treated By Different Systems And Specialties. Results From The Medical Outcomes Study," *Journal of American Medical Association*, 274:18, November 8, 1995, 1436-44; Preston and Retchin, "The Management Of Geriatric Hypertension In Health Maintenance Organizations," *Journal of American Geriatrics Society*, 39:7, July 1991.

Areas of Quality Concern

Several studies point to specific areas of quality concerns in HMOs.

Elderly and Poor Chronically Ill. The Medical Outcomes Study, conducted by John Ware and colleagues, suggests that while outcomes were the same on average for the average patient, the chronically ill elderly and chronically ill poor fare worse in HMOs than in indemnity plans.[50,51] Elderly HMO patients had worse physical outcomes (54% declined in physical health versus 28% for indemnity) yet better mental health outcomes (26% improved versus 13% for indemnity). For non-elderly HMO patients, physical health was better. Poor HMO patients (at or below 200% of the poverty line) in poor health did worse than poor indemnity patients in poor health (2-point decline in physical health versus 5.4 point improvement). However, non-poor HMO patients had better outcomes than non-poor indemnity patients did. In another outcomes study, based on HCFA Medicare data sets, results also indicate that for frail populations managed care poses particular challenges that require special attention from the policy community.[52]

Shorter Lengths of Stays. Both the popular press and several studies question whether shortened lengths of stay under managed care for certain procedures constitute appropriate quality. One recent industry-sponsored study, based on data provided by The MEDSTAT Group, found that approximately the same proportion of HMO and indemnity admissions had lengths of stays equal to or greater than both American College of Surgeons and Milliman & Robertson's optimal recovery guidelines.[53]

Maternity stays, however, have been an area of intense debate, and recently both federal and state legislation has mandated coverage of 48 hour maternity stays if needed.[54] One study confirmed that HMOs discharge mothers one day after delivery more often than POS or indemnity, and that western HMOs discharge mothers one day after delivery more often than HMOs in other regions.[55] Quality results, however, did not strictly suggest poorer quality with shorter stays. A recent study

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[47] Yelin, et al., "Health Care Utilization And Outcomes Among Persons With Rheumatoid Arthritis In Fee-For-Service And Prepaid Group Practice Settings," *JAMA*, 276:13, October 2, 1996, 1048-53.

[48] Braveman P, et al., "Insurance Related Differences in the Risk of Ruptured Appendix," *The New England Journal of Medicine*, 331:7, August 18, 1994, 44-9.

[49] Brook, et al., "Quality Of Ambulatory Care. Epidemiology And Comparison By Insurance Status And Income," *Medical Care*, 28:5, May 1990, 392-433; Lurie, et al., "The Effects Of Capitation On Health And Functional Status Of The Medicaid Elderly. A Randomized Trial," *Annals of Internal Medicine*, 120:6, March 15, 1994, 506-11; Murata, et al., "Quality Measures for Prenatal Care: A Comparison of Care in Six Health Plans," *Archives of Family Medicine*, 3:1, January 1994, 41-9; and Angus, et al., "The Effect Of Managed Care On ICU Length Of Stay: Implications For Medicare," *JAMA*, 276:13, October 2, 1996, 1075-82.

[50] Op Cit, Ware J, et al., "Differences in 4-Year Health Outcomes for Elderly and Poor, Chronically Ill Patients Treated in HMO and Fee-for-Service Systems: Results From the Medical Outcomes Study."

[51] Olmos D, "Ill Elderly and Poor Fare Worse in HMOs, Study Says," *Los Angeles Times*, October 2, 1996, A1.

[52] Manton K, et al., "Social/Health Maintenance Organizations and Fee for Service Health Outcomes Over Time," *Health Care Financing Review*, 15:2, Winter 1993, 173-202.

[53] American Association of Health Plans, "An Analysis of Inpatient Hospital Lengths of Stays for Selected DRGs," October 1997.

[54] California AB 38 1997, amended by AB 1553 1997, and federal HR 3666 1996.

[55] Gazmararian J, Koplan J, "Length-Of-Stay After Delivery: Managed Care Versus Fee-For-Service," *Health Affairs*, 15:4, Winter 1996, 74-80.

of Washington State vaginal deliveries from 1991 to 1994 suggested moderately increased risk of hospital readmissions related to shorter lengths of stay, at least in the absence of substitute services.[56,57] However, the study does not suggest that patients experienced worse outcomes due to readmissions. In addition, the authors suggested that outcomes may have had more to do with education of the mother and follow-up care than length of hospital stay.

Detection and Treatment of Mental Health. The Medical Outcomes Study suggests several areas of concern related to mental health in managed care, including the poorer detection of mental health problems and inappropriate use of antidepressants and tranquilizers, and counseling by generalists rather than specialists.[58,59] However, despite lower detection and counseling rates, this study found no difference in overall outcomes between HMO and indemnity depressed patients. The study did find that HMO psychiatry patients had significantly worse functional outcomes than indemnity psychiatry patients did.

Customer Satisfaction Studies

In addition to objective measures of outcomes, customer satisfaction is a valuable indicator of the quality and perceived quality of care and service customers receive. According to several studies, satisfaction with various forms of managed and unmanaged care are mixed and often contradictory. Most studies of the insured adult population conclude that Americans are generally satisfied with their health care coverage and the quality of their care, regardless of type of plan.[60,61,62,63] However, there is variation in satisfaction among plans within plan model types, and for some populations and some measures satisfaction is lower. (For more detail, see also Task Force paper on Observations of Public Perceptions.) In addition, there is some concern that many satisfaction surveys, by sampling a population that is mostly healthy and who use health services little, mask some dissatisfaction and problems in the population that needs and uses services most.[64]

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[56] Liu L, Clemens C, Shay D, Davis R, Novack A, "The Safety of Newborn Early Discharge, The Washington State Experience," *JAMA*, 278:4, July 23/30, 1997, 293-8. Though an article published in the same issue of JAMA in contrast concluded that early discharge following an uncomplicated postpartum hospital stay appears to have little or no independent effect on the risk of reospitalization for feeding-related problems (Edmonson M, Stoddard J, and Owens L, "Hospital Readmission With Feeding-Related Problems After Early Postpartum discharge of Normal Newborns," *JAMA*, July 23/30, 1997, 278:4, 299-303), this study lacked the statistical power to detect a significant effect as described in "Commentary: Early Discharge and Evidence-Based Practice," *JAMA*, July 23/30, 1997, 278:4, 334-6.

[57] Braveman P, et al., "Commentary, Early Discharge and Evidence-based Practice, Good Science and Good Judgement," *JAMA*, 278:4, July 23/30, 1997, 334-6.

[58] Wells K, Sturm R, "Care for Depression in a Changing Environment," *Health Affairs*, 14:3, Fall 1995, 78-89.

[59] Wells K, Hays R, Burnam M, Rogers W, Greenfield S, Ware J, "Detection of Depressive Disorder for Patients Receiving Prepaid or Fee-for-Service Care: Results From the Medical Outcomes Study," *JAMA*, 262:23, December 15, 1989, 3298-3302.

[60] Op Cit, Donelan K, "What Patients *Really* Think of Managed Care."

[61] Op Cit, "Public Opinion of Health Plans Up," Health Market.

[62] Pacific Business Group on Health (PBGH), *California Consumer HealthScope*, 1997.

[63] "Health Care in California", Study #361, *Los Angeles Times*, June 1995.

[64] Margaret Stanley of CalPERS, in testimony to the Managed Health Care Improvement Task Force, Sacramento, July 26, 1997, said "We shouldn't feel overly reassured that the overall satisfaction rates are that high without looking into people who are seriously ill and how the system is serving them."

C. Trends in Quality under Managed Care

Several quality-enhancing activities are associated with managing care. They include: quality measurement, quality improvement, process improvement, provider profiling and publishing provider outcomes measures, continuity and coordination of care, disease management, prevention and health promotion, early diagnosis, reduction in treatment variation, concentration of volume sensitive procedures in high volume centers, and rewarding quality. Many of these activities have been driven by purchasers and not the organizations themselves. Not all managed care organizations have embraced them or embraced them all. None of these activities are sufficient in and of themselves, but must work together with other elements to improve quality.

Quality Measurement

Historically, quality assurance activities in health care included Medical Board licensure for physicians, hospital audit committees, and efforts to take corrective actions after mistakes to reduce the likelihood of recurrence[65]. Given the potential for under-utilization with some forms of financial arrangements that allow providers to assume financial risk for the cost of patient care (See Task Force paper on Provider Financial Incentives), such retrospective review may not be sufficient to assure quality. The quality measurement of process and outcomes data that is in use today stems largely from demand for more information from employers and consumer groups to prospectively evaluate health coverage options. In addition, providers can use quality measures to improve quality. Many public and private organizations are active in the area of quality measurement, including the National Committee for Quality Assurance (NCQA) and Foundation for Accountability (FAcct) (see Task Force paper on Regulatory Organization for information on current quality measurement and accreditation organizations and activities).

Quality Improvement

Providers' professional ethic has always driven them to want to improve. Because managed care organizations are responsible for both financial and clinical aspects of health care, many of these organizations have implemented quality improvement programs. One study showed that 72% of capitated network physician groups used tools for continuous quality improvement[66]. Groups that were older, more profitable or had a greater proportion of capitation contracts were more likely to use these tools. However, more groups focus on improvement activities related to overuse and preventive care compared to underuse and chronic disease care. As medical groups assume greater risk and work to improve cost and quality, their new practice patterns spill over to their indemnity patients as well[67,68].

Process Improvement

HMOs and medical groups work to improve both administrative and clinical processes. For example, the cost of total hip replacements has declined while quality has improved due to both

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[65] The federal HMO Act and the Knox-Keene Act require quality assurance systems.

[66] Kerr E, Mittman B, Hays R, Leake B, Brook R, "Quality Assurance in Capitated Physician Groups: Where Is the Emphasis?" *JAMA*, 276:15, October 16, 1996, 1236-9.

[67] Welch W, "HMO Market Share and Its Effect on Local Medicare Costs," *HMOs and the Elderly* Edited by Luft H, Ann Arbor, MI, 1994.

[68] Baker L, "HMOs and Fee-for-Service Health Care Expenditures: Evidence from Medicare," Manuscript, Stanford University, August 1995.

technological advances and process improvements.[69] The average length of stay for hip replacements in the US, according to the study, decreased from 17 days to six days (three at some institutions) from 1983 to 1995, through practices including preoperative patient education, preoperative home visits by social workers, preoperative antibiotics, clinical guidelines, spinal anesthesia, earlier physical therapy, home care, nursing home care, standardized prostheses, and competitive bidding for prostheses.

One HMO that provided information to the Task Force reported improvement in annual sigmoidoscopy screening rates for colon cancer detection in 50 to 79 year olds from 3.9% to 8.9% from 1993 to 1996, estimating prevention of 170 colon cancers.[70] Another profiled providers by comparing 55 risk-adjusted measurements on clinical quality, utilization management, member satisfaction and administrative efficiency for each medical group with national benchmarks. After they implemented the profile, the HMO's prenatal care increased by 35% to 90% of pregnant members receiving prenatal care (national benchmark status), and cervical cancer screening increased by 17% to national benchmark status of 75% of adult women screened.[71]

Provider Profiling and Publishing Provider Outcomes Measures

Some HMOs evaluate provider performance and use peer group comparisons to encourage improvement. In addition, several HMOs and medical groups pay physicians at least in part on the basis of risk-adjusted quality report cards.[72]

External pressure, through publishing provider performance measures, has also proven to be a valuable source of quality improvement, though not limited to managed care. New York State studied published risk-adjusted mortality outcomes for hospitals and surgeons performing coronary artery bypass grafts (CABGs).[73] From 1989 to 1995, the years covered by the survey, risk-adjusted mortality rates declined from 3.52 to 2.52 per 100 patients from 1989 to 1995. Health care experts say the surveys themselves have contributed to the improved mortality rates because they give hospitals the opportunity to focus on the way they perform the operations.[74]

Continuity and Coordination of Care

Many HMOs use primary care providers (PCPs) to coordinate patient and sometimes family care. PCPs are responsible for referring patients for specialty care, coordinating treatments, preventing duplicative testing, and reviewing drug prescriptions for contraindications. Where effective, PCPs may improve continuity, however the gatekeeping role provided by PCPs has also created tension (See discussion in Task Force paper on Physician-Patient Relationship).

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[69] Keston V, Enthoven A, "Total Hip Replacement: A Case History of Improving Quality While Reducing Costs," *Health Care Management Review*, Winter 1997, forthcoming.
[70] Public testimony presented to the Managed Health Care Improvement Task Force, Sacramento, CA, July 26, 1997.
[71] Information submitted to the Managed Health Care Improvement Task Force, 1997.
[72] Information submitted to the Managed Health Care Improvement Task Force, 1997.
[73] Hannan E, et al., "Improving the Outcomes of Coronary Artery Bypass Surgery in New York State," *JAMA*, 271:10, March 9, 1994, 761-6; and Fein E, "New York Expands Program to Evaluate Hospitals Record on Surgery," *The New York Times*, November 8, 1997, A22.
[74] Op-Cit., Fein E, "New York Expands Program to Evaluate Hospitals Record on Surgery."

Disease Management

A term invented by the Boston Consulting Group in 1993, disease management is a complete, systematic approach to treating chronic diseases to reduce complications, overall utilization, and cost which has been applied by HMOs and other managed care organizations.[75] Using the principles of disease management, some HMOs care for chronically ill by applying clinical guidelines, patient education, provider education, monitoring, prevention and outcomes measurement. Guidelines can contribute to quality of care by reducing unwarranted variation in clinical decision making and by providing practitioners with concise, practical advice on the diagnosis and treatment of illness.[76] One HMO that testified before the Task Force reported that just 16% of their members with several chronic conditions represented 67% of pharmacy costs and 50% of hospital costs. Upon finding that few asthmatics used peak flow meters, they sent peak flow meters and videos explaining their use directly to all their asthmatic members.[77] (See also Task Force paper on the Physician-Patient Relationship).

Most HMOs use guidelines only as recommendations to accommodate differences among patients and their preferences as is appropriate since the individual needs of each patients should ultimately determine appropriate care. In practice, studies suggest that guidelines have limited ability to change practitioner behavior.[78] However, some providers may perceive guidelines as fixed constraints because they fear being an outlier.

Prevention and Health Promotion

One study presented to the Task Force found that managed care organizations provide more clinical preventive services than their indemnity counterparts.[79] Another study found that HMOs are significantly more likely to offer health promotion programs to their members compared to indemnity plans, more likely to make their health promotion programs they offer available to the general public, and more likely to evaluate the impact of their health promotion programs on medical costs and health status.[80]

In addition, several HMOs that testified before or submitted information to the Task Force referenced their efforts in health promotion and prevention.[81] One HMO surveyed its diabetic members and found that too few diabetics were getting annual retinopathy exams. In order to improve, the HMO sent a joint letter with each medical group to remind patients to schedule this exam. Another HMO sent preventive health reminders on postcards to over 600,000 members in

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[75] Epstein R and Sherwood L, "From Outcomes Research to Disease Management: A Guide for the Perplexed," *Annals of Internal Medicine*, 124:9, May 1, 1996, 832-837.

[76] Blumenthal D and Scheck A, eds., *Improving Clinical Practice: Total Quality Management and the Physician*, San Francisco: Jossey-Bass, 1995.

[77] Public testimony presented to the Managed Health Care Improvement Task Force, Sacramento, CA, July 26, 1997.

[78] Yandell B, "Critical Paths at Alliant Health System," *Quality Management in Health Care*, 3:2, 1995, 55-64.

[79] Shauffler H, Brown E, Rice T, "The State of Health Insurance in California, 1996," The Health Insurance Policy Program, University of California, Berkeley (Los Angeles: UCLA CHPR) 1997, funded by The California Wellness Foundation.

[80] Schauffler H and Chapman SA, "Health Promotion and Managed Care: Surveys of California's Health Plans and Populations," *American Journal of Preventive Medicine*, 14:2 1998, forthcoming.

[81] Testimony submitted or presented to the Managed Health Care Improvement Task Force, Sacramento, July 26, 1997.

1996, and additional follow up materials to groups with low screening rates. Screening rates subsequently improved by over 50%.

These efforts are often encouraged by purchasers. For example, PBGH adopted guidelines for appropriate preventive care, rewards health plans based on their performance with respect to the guidelines, and encourages employers and workers to choose health plans that excel in promoting health.[82]

Early Diagnosis

Once at risk for the cost of care, managed care organizations have an incentive for early detection of illnesses for which early treatment can save dollars and lives. A Health Care Financing Administration (HCFA) study found that 58% of Medicare HMO patients were diagnosed at the earliest stage of cervical cancer versus 39% of indemnity patients.[83]

Reduction in Treatment Variation

Studies show significant variations in practice patterns nationally.[84] This is true across all models of care delivery. While some variation is inevitable, significant variation implies that some resources are being wasted and some patients are undergoing treatment unnecessarily, possibly dangerously. Some managed care organizations have identified reduction in practice variations as a goal and have designed studies to reduce variations among practitioners.

Concentration of Volume-Sensitive Procedures in High Volume Centers

Several studies of coronary artery bypass graft (CABG) surgery as well as angioplasty and percutaneous transluminal coronary revascularization (PTCR) show that outcomes improve with higher physician and/or hospital volumes.[85,86,87,88] To improve quality, some HMOs consolidate these and other volume-sensitive procedures in high volume centers and centers of excellence. One CABG study reported that 51% of patients at low volume hospitals in California are indemnity Medicare beneficiaries.[89] In contrast, group and staff model HMOs contract only with high or intermediate volume facilities, and IPA HMOs use intermediate and high volume facilities slightly more often than indemnity.[90] This may mean that all academic medical centers are not accessible

[82] Schauffler H, Rodriguez T, "Exercising Purchasing Power For Preventive Care," *Health Affairs*, 15:1, Spring 1996, 73-85.
[83] Op Cit, Riley, et al., "Stage of Cancer at Diagnosis for Medicare HMO and Fee-for-Service Enrollees."
[84] Wennberg J, *The Dartmouth Atlas of Health Care*, Chicago: American Hospital Association, 1996.
[85] Grumbach K, Anderson G, Luft H, Roos L, Brook R, "Regionalization of Cardiac Surgery in the United States and Canada, Geographic Access, Choice, and Outcomes," *JAMA*, 274:16, October 25, 1995, 1282-8.
[86] Chernew M, Hayward R, Scanlon D, "Managed Care And Open-Heart Surgery Facilities In California," *Health Affairs*, 15:1, Spring 1996, 191-201.
[87] Jollis J, et al., "Relationship Between Physician and Hospital Coronary Angioplasty Volume and Outcome in Elderly Patients," *Circulation*, 95:11, June 3, 1997, 2485-91.
[88] Ellis S, et al., "Relation of Operator Volume and Experience to Procedural Outcome of Percutaneous Coronary Revascularization at Hospitals With High Interventional Volumes," *Circulation*, 96:11, June 3, 1997, 2479-84.
[89] Op Cit, Chernew M, Hayward R, Scanlon D, "Managed Care And Open-Heart Surgery Facilities In California."
[90] Information submitted to the Managed Health Care Improvement Task Force by California HMOs, 1997.

to some HMO enrollees for all procedures[91] (See Task Force paper on Academic Medical Centers).

Rewarding Quality

HMOs create a structure that can be held accountable for the health of the populations they serve. Some purchasers are holding HMOs accountable by structuring HMO contracts with rewards for quality. HCFA is considering adjusting Medicare HMO payments for quality. For example, HMOs with high HEDIS scores would receive higher premiums. Similarly, PBGH asked HMOs to risk 2% of their premiums on measures of customer service, quality and data provision.[92] PBGH negotiates specific dollar amounts and targets based on past performance, the need for improvement and the ability to improve. PBGH asks HMOs with lower performance to improve more dramatically and to risk more.

HMOs can also put some of its providers' capitation payments at risk for meeting quality measures. One HMO told the Task Force that it links 1% of its capitation payments to medical groups with which it contracts to patient satisfaction, quality care processes, and data provision.[93] Similarly, the HMO adjusts hospital payments on the basis of service and quality. Another HMO pays their providers bonuses for meeting certain targets for preventive screenings and immunizations.[94]

III. IMPACT OF MANAGED CARE ON ACCESS

Access is a multi-faceted issue, and the story of access under managed care is one of trade-offs. Barriers to access can be structural (e.g., availability, organization, transportation), financial (e.g., insurance coverage, reimbursement rates, public support) or personal (e.g., acceptability, cultural, language, attitudes, education, income).[95] HMOs have generally improved financial access to insurance and care. Lower HMO premiums mean more people can afford coverage.[96] Modest copayments and no deductibles make care at the point-of-service for those covered generally more affordable. In addition, HMOs provide access to certain benefits, such as pharmaceuticals, that were not typically covered benefits in unmanaged products. For example, a 1996 Mathematica study found costs were lower for Medicare HMO members than traditional Medicare beneficiaries: 76% paid no premium, and 83% had prescription benefits, while traditional Medicare recipients usually paid Medi-Gap premiums and had no pharmaceutical coverage.[97]

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[91] Anecdotal testimony to the Task Force at public hearings suggested that centers of excellence often have difficulty in obtaining contracts with health plans. However, this does not necessarily demonstrate that HMOs do not contract with other centers of excellence.

[92] Op Cit, Schauffler H, Rodriguez T, "Exercising Purchasing Power For Preventive Care."

[93] Testimony submitted to the Managed Health Care Improvement Task Force by a California HMO.

[94] Testimony submitted to the Managed Health Care Improvement Task Force by a different California HMO.

[95] Docteur E, Colby D, Gold M, "Shifting the Paradigm: Monitoring Access in Medicare Managed Care," *Health Care Financing Review*, 17:4, Summer 1996, 5-21.

[96] Op Cit, Shiels J and Haught R, "Managed Care Savings for Employers and Households: Impact on the Number of Uninsured."

[97] Nelson L, et al., "Access To Care In Medicare HMOs, 1996," *Health Affairs*, 16:2, March/April 1997, 148-56.

Despite lower overall costs generally and the lower proportion of total health care costs born by consumers, some consumers perceive their costs going up because their employers have shifted responsibility for additional costs to them directly.[98] In fact, employer-paid benefits come out of employees' total compensation, at least in the long-run, but this is an economic principle that consumers do not generally recognize.[99] Consumers experienced 64% and 79% increases in their average monthly premium contributions for employee and family coverage respectively between 1988 and 1993, according to a Bureau of Labor Statistics study of employees in large firms.[100] In 1997, employee premium contributions and deductibles were lower than the previous year, but HMO and POS copayments showed signs of increase from $0 to $5-10 on average.[101] Nevertheless, without managed care, these cost increases would likely have been greater.

The flip-side of greater financial access is tighter restrictions on access to providers and services. Because HMOs require lower cost-sharing in general than non-HMOs demand for services increases, requiring HMOs to restrict services based on need in order to control costs. Closed-end HMOs restrict choice of providers to those within their networks. At-risk HMOs and their contracted medical groups and IPAs also apply greater restrictions on access to providers and services as they attempt to manage utilization and prevent unnecessary care. According to some, additional access concerns under managed care include formulary restrictions, mental health services restrictions, and lack of insurance coverage in rural areas. Enrollees of managed care plans, especially vulnerable populations, also report greater unmet medical needs than in unmanaged plans.

A. Access to Insurance

Lower Increase in Uninsured

As a result of cost containment, managed care may have improved overall access by preventing more people from becoming uninsured. Studies have shown that employer coverage is sensitive to the price of insurance.[102] The Lewin Group calculated that in 1996 three to five million additional Americans are insured due to managed care cost reductions, noting that because premiums are lower, more employers offer benefits.[103] To develop this estimate, Lewin reviewed studies showing how the number of employers purchasing insurance changes at various price levels. Based upon these calculations they estimated that for every one percent increase in premiums, the number of employers purchasing health insurance would decline by 0.40 percent (i.e., the price elasticity of employer demand for health insurance is -0.40).[104] An independent health economist

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[98] Tannenbaum J, "Health Costs at Small and Midsize Firms Decline," *The Wall Street Journal*, September 11, 1997, B2.

[99] Op Cit, Fuchs V, "It's Not Employers Who Bear the Costs."

[100] US General Accounting Office, "Employment-Based Health Insurance: Costs Increase and Family Coverage Decreases," GAO/HEHS-97-35, February 24, 1997.

[101] KPMG Peat Marwick, *Health Benefits in 1997*, Tysons Corner: VA, 1997.

[102] Phelps C, *The Demand for Health Insurance: A Theoretical and Empirical Investigation*, Report R-1054-OEO Santa Monica, CA: The RAND Corporation, 1973; Leibowitz A and Chernew M, "The Firms' Demand for Health Insurance," *Health Benefits and the Workplace*, Washington: US Department of Labor, 1992.

[103] Op Cit, Shiels J and Haught R, "Managed Care Savings for Employers and Households: Impact on the Number of Uninsured."

[104] Shiels and Haught, 1997, based on Gruber J and Poterba J, "Tax Subsidies to Employer-Provided Health Insurance," *NBER working paper*, June 1995; Thorpe K, et al., "Reducing the Number of Uninsured by Subsidizing

at University of California at San Diego corroborated this estimate.[105] In estimating the impact on the number of uninsured, Lewin assumed that about one-third of those who would have lost employer coverage would obtain coverage from some other source such as Medicaid, a spouse's employer plan or individually purchased non-group coverage.[106]

The converse also appears to be true. That is, regulations that undermine cost containment efforts of managed care plans may increase uninsurance. In studies that examine the impact of benefit mandates and other requirements on health plans, the US Congressional Budget Office suggests that effects include both reductions in benefits and reduced coverage.[107]

Rural Areas

Access to insurance of all plan model types is a problem in rural areas. Rural HMOs have difficulties because of inadequate populations for risk distribution and too few providers.[108] In addition, rural providers are often overworked, have little competition, charge high prices and have no incentive to join an HMO.[109] To support rural HMOs, the Agency for Health Care Policy and Research (AHCPR) and HCFA have funded demonstration projects. Meanwhile, all 24 of California's rural counties have group or network HMOs in at least part of the county, 12 also have IPA models and nine also have mixed models. Furthermore, Knox-Keene rules requiring contiguous HMO expansion have helped to improve access in rural areas.

B. Access to Care

Studies of access suggest managed care's impact has been mixed.

Privately-Insured Population.The Robert Wood Johnson Foundation (RWJ) National Access Survey found HMOs had shorter waiting times and more and more widespread medical visits, but also longer travel distances and greater unmet medical needs.[110] In their survey of 3,450 people with private insurance (HMO, PPO or indemnity), and additional samples of people reporting access barriers or certain serious illnesses, RWJ found that HMOs had the lowest office waiting time at the regular source of care: 13% of HMO enrollees reported waiting over 30 minutes, versus 17% of PPO enrollees and 20% of indemnity enrollees. In addition, 85% of HMO enrollees reported a medical visit within the past year, compared to 80% of indemnity enrollees, and HMO

Employment-Based Health Insurance: Results from a Pilot Study," *JAMA*, February 19, 1992, 945-948; Barrand N and Helms W, "Testimony before the Subcommittee on Health, Committee on Ways and Means, US House of Representatives," Princton, NJ: The Robert Wood Johnson foundation, 1991; and Helms, et al., "Mending the Flaws in the Small Group Market"; and McLaughlin and Zellers, "The Shortcomings of Voluntarism in the Small-Group Market".

[105] Richard Kronick, personal communication based on research for a forthcoming publication.

[106] Sheils and Haught, 1997: this estimate is based on an analysis of the percentage of persons lacking coverage from some other source who elect to purchase individual non-group coverage, Sheils J, "Health Insurance Coverage Under Alternative Health Reform Proposals," report to the Henry J. Kaiser Family Foundation, The Lewin Group, Inc., November 4, 1994.

[107] Congressional Budget Office, "CBO's Estimates of the Impact on Employers of the Mental Health Parity Amendment in H.R. 3103," May 13, 1996.

[108] Ricketts T, Slifkin R, Johnson-Webb K, "Patterns of Health Maintenance Organization Service Areas in Rural Counties," *Health Care Financing Review*, 17:1, Fall 1995, 99-113.

[109] Op Cit, Serrato C, Brown R, Bergeron J, "Why Do So Few HMOs Offer Medicare Risk Plans in Rural Areas?"

[110] Op Cit, Mark T, Mueller C, "Access To Care In HMOs And Traditional Insurance Plans."

members with a visit averaged 4.8 per year, versus 4.0 for indemnity. However, 17% of HMO enrollees reported traveling over 30 minutes for that care compared to 12% of PPO enrollees.[111] Additionally, 4.8% of HMO enrollees reported an unmet medical need, compared to 3.0% of indemnity enrollees. When sorted by income, low-income HMO enrollees (Medicaid and non-Medicaid) with at least one visit averaged 8.6 per year, versus 5.3 for low-income indemnity enrollees.

Non-Elderly Ill. Another RWJ-sponsored study conducted by the Harvard School of Public Health found that while non-elderly sick or disabled persons in managed care plans report lower out-of-pocket expenses, they have more problems getting the health services or treatment they or their doctors think is necessary than their counterparts in indemnity plans (22% of sick people in managed care plans reported major or minor problems compared to 13% in indemnity plans).[112] The study also found that managed care enrollees were more likely to report difficulty getting access to diagnostic tests (24% compared to 17% were unable to get the needed diagnostic tests in the past year), and waited longer for medical care (17 days compared to 12 days to get an appointment).

Medicare Managed Care Population. A 1996 Mathematica survey found lower costs for Medicare HMO members, greater access to prescription benefits, and more preventive care, but greater access problems, especially among vulnerable populations.[113] Mathematica surveyed 3,080 Medicare HMO members and compared results to the 1994 Medicare Current Beneficiary Study for indemnity. Overall, HMO enrollees were satisfied with their access to care. However, 13% of HMO enrollees reported access problems compared to 4% of indemnity. HMO enrollees received more preventive care than indemnity beneficiaries did. However, vulnerable sub-populations (the nonelderly disabled, the oldest old, those with functional impairments and those in fair, poor or declining health) reported more access problems in HMOs than indemnity.

C. Access to Providers

Closed-end HMOs select medical groups, IPAs, and practitioners for their provider networks. Members' access to providers may be restricted to those providers participating in the network. The RWJ-Harvard School of Public Health study found that managed care enrollees were more likely to report difficulty getting access to specialist care than their counterparts in indemnity plans (21% compared to 15% were unable to see specialist when they needed one in the past year).[114]

A rapidly spreading innovation, point of service plans (POS) offer some coverage for care without a referral or outside the network for a deductible and higher cost-sharing. Many California HMOs now offer POS plans, though not all consumers have access to these plans. The 1995-96 AAHP annual industry census found that over 80% of HMOs currently offer POS products which offer

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[111] In California, Knox-Keene regulated health plans are required in general by Rule 1300.51(H) to provide access to care within 30 minutes of 15 miles of members' home or work, so this problem may not apply in Calfornia.
[112] Op Cit, Donelan K, Blendon R, et al., "All Payer, Single Payer, Managed Care, No Payer: Patients' Perspectives in Three Nations."
[113] Op Cit, Nelson L, et al., "Access To Care In Medicare HMOs, 1996."
[114] Op Cit, Donelan K, Blendon R, et al., "All Payer, Single Payer, Managed Care, No Payer: Patients' Perspectives in Three Nations."

access to providers outside the network at some additional cost.[115] However, if these plans are not carefully constructed, POS can open certain vulnerable consumers to greater financial risk than is readily apparent in marketing and evidence of coverage materials.

Many HMOs require consumers to choose a primary care provider (PCP) to coordinate their care. Some HMOs allow family members to choose among different medical groups or IPAs so each can have his or her own personal provider. In general, patients who need care from another provider must obtain a referral from their PCP. This process is often a source of tension for providers and patients. *Consumer Reports* suggests that some referral processes are designed to make patients give up.[116] For further discussion of the gatekeeper role of PCP and the potential impact of certain financial arrangements, see the Task Force papers on Physician-Patient Relationship and Provider Financial Incentives.

In response to customer demand, many HMOs have developed new products with improved access. Some HMOs allow members to be referred to any network provider, regardless of which medical groups they participate in. Others do not restrict referrals to the PCP's medical group. Still more HMOs allow patients to visit specialists in their PCP's group without a referral for a higher copayment. In addition, access to specialists for patients with chronic conditions is often more flexible. A 1994 Mathematica survey found that more than 75% of HMOs nationally allow specialists to serve as primary care providers for some patients.[117] Anecdotal evidence presented to the Task Force during public hearings, however, indicated continued problems with access for some to specialists in California.

D. Access to Hospitals

Historically, hospitals shifted uncompensated costs of government program (e.g., Medicare and Medicaid) and other patients to private sector patients whose insurance covered the cost. With an increasing proportion of private patients in managed care plans, this practice is no longer possible and hospital reserves are being depleted.[118] If these trends continue, hospitals in California may not have adequate reserves to enable them to comply with California law (SB 1953 1994) that requires them to complete costly seismic safety upgrades by the year 2007. This is particularly a problem for hospitals in rural areas because they typically shoulder a greater burden of uncompensated care.

Hospital representatives have suggested variation in hospital accessibility by geography, season, and class of service.[119] Typically, rural and inner city hospitals have greater access problems than hospitals in other areas. The patient census at a typical hospital is higher during the winter months than in the summer, beginning in October and ending in March. This is because there is seasonal variation in some diseases, such as cardiac illness, which increases with stress and pressure associated with the holidays. There may also be more access problems in emergency

[115] AAHP Fact Sheet, "Access to Care," July 29, 1997.
[116] Op Cit, Consumers Union of U.S., Inc., "How Good Is Your Health Plan? Part One of a Two-part Report."
[117] Felt-Lisk S, "How HMOs Structure Primary Care Delivery," *Managed Care Quarterly* 4:4, Autumn 1996, 96-105.
[118] Tranquada R, "Emergency Medical Care and the Public Purse," *JAMA*, 276:12, September 25, 1996, 945-6.
[119] Statement to the Managed Health Care Improvement Task Force by Task Force member, Nancy Farber, Washington Hospital, October 28, 1997, Sacramento, CA.

rooms (ERs), intensive care units (ICUs), and critical care units (CCUs) than in other hospital units. Under current law Knox-Keene regulated health plans must have adequate ERs, ICUs and CCUs under contract to operate.[120]

Access to hospital ERs is a complex issue. The ER is often a poor (and expensive) substitute for an office visit. Because ERs have been and continue to be abused and overused, HMOs have provided alternative services to help guide patients to the appropriate care setting. Some HMOs now offer telephone advice from nurses 24 hours a day. Unless the need is urgent, patients and caregivers can call advice nurses first.

When emergency care is necessary, HMOs are required by law to provide that coverage. The federal Consolidated Omnibus Budget Reconciliation Act (COBRA) requires that, when a patient presents in an ER, a physician must assess the patient prior to screening for insurance coverage. In addition, federal and state legislation has addressed complaints about overly restrictive access to ERs. With the passage of SB 1832 in 1994, HMOs are required to use a "prudent layperson's" standard. That is, if a prudent layperson would believe his life or health was in danger and emergency care was needed, he may go to the ER without prior authorization from his HMO and the insurance must pay, even if subsequent investigation reveals no danger. Testimony submitted to the Task Force by the California Chapter of the American College of Emergency Physicians, however, suggested that greater enforcement of this provision is necessary. For Medicare and Medicaid HMOs, the federal Balanced Budget Act of 1997 requires the prudent layperson standard. For ERISA plans (those paid by self-insured employers), federal HR 815 proposes this standard.

E. Access to Pharmaceuticals

Most HMOs and other managed care organizations provide pharmaceuticals as a covered benefit. This represents an improvement in access for those whose coverage does not include outpatient drugs.

HMOs created formularies (i.e., a pre-approved list of selected drugs, used to guide physician prescription decisions) to lower pharmaceutical costs and maintain affordable drug coverage. Without formularies, drug coverage could become more costly, and fewer Americans could afford it. Formularies have helped Medicare HMOs offer affordable pharmaceutical benefits, while indemnity Medicare does not cover outpatient drugs at all.

Formularies are an important tool because drug costs are rising rapidly. Prescription drug costs grew at 8% per year between 1990 and 1995. Spending growth was slower than total personal health care expenditures in 1993 and 1994, but jumped to 2% faster than personal health care expenditures in 1995, in part because switching to managed care increases the likelihood of prescription coverage.[121] Drug costs rose 13% in 1996, largely due to the introduction of new, higher prices of older, and increased use of drugs.[122] According to Hambrecht & Quist, while

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[120] SB 1832 CA 1994, Chapter 614.
[121] Levit K, et al.,"National Health Expenditures: 1995," *Health Care Financing Review*, 18:1, Fall 1996, 175-214.
[122] Johannes L, "Dose of Austerity: Some HMOs Now Put Doctors on a Budget for Prescription Drugs," *The Wall Street Journal*, May 22, 1997.

drugs accounted for 10% of HMOs' medical budgets in 1996, they accounted for 50% of their cost increases.[123]

Formularies attempt to save money by directing patients to less expensive drugs when more costly alternatives provide little or no incremental benefit, allow managed care organizations to buy in large quantities, offer generics, and negotiate prices among similar drugs. Evidence suggests some formularies save money. For example, after the Omnibus Budget Reconciliation Act of 1990 (OBRA 1990) eliminated closed Medicaid formularies, Alabama drug costs increased by 62%.[124]

Pharmaceutical manufacturers, however, argue that many drugs offset their high costs by reducing other health care costs. One study, the Managed Care Outcomes Program, followed 13,000 patients with arthritis, asthma, ulcer, hypertension and otitis media for one year at five HMOs with closed formularies and one with an open formulary.[125] After risk adjustments, the more limited the formulary, the higher the prescription count, number of office visits, emergency room visits and hospitalizations. This study, however, did not examine whether the patients' providers were responsible for total health care costs or for costs excluding pharmacy which could have affected the provider's behavior and potentially the outcomes examined in the study.

HMO formularies have been criticized because (1) prescription restrictions may not be adequately disclosed to enrollees, (2) formulary decisions may be based on drug discounts rather than rigorous analysis of comparative benefits and costs, and (3) continuity of prescriptions may be interrupted if health plans change formulary drugs or if an individual changes plans.[126] Patients who changed drugs after joining new HMOs because their old drugs were not on the new plan's formulary have reportedly suffered side effects from the new drugs.[127,128] HMOs have also been criticized for placing medical groups at risk for unrealistically low prescription drug budgets.[129] This practice could be detrimental if groups select drugs without consideration of their impact on total costs.

In addition, formularies may cause an administrative burden for patients and providers if it is difficult to obtain approval for non-formulary drugs. Administration is especially complex for medical groups and other providers who may serve more than a dozen health plans, each with their own formulary with which the providers must comply. There is considerable debate about which is the most appropriate entity and which has the necessary resources and expertise to determine the formulary: the health plan, a pharmacy benefit manager (PBM), or the medical group.

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[123] Op Cit, Johannes L, "Dose of Austerity: Some HMOs Now Put Doctors on a Budget for Prescription Drugs."
[124] Walser B, Ross-Degnan D, Soumerai S, "Do Open Formularies Increase Access To Clinically Useful Drugs?" *Health Affairs*, 15:3, Fall 1996, 95-109.
[125] Horn S, et al., "Intended and Unintended Consequences of HMO Cost-Containment Strategies: Results from the Managed Care Outcomes Project," *The American Journal of Managed Care*, I:3, March 1996, 253-64.
[126] "Joint Oversight Hearing on the Regulation of Pharmaceutical Benefit Managers (PBMs): Current Trends, Future Options", Senate Committee on Insurance and Conference Committee on Assembly Bill 1136, February 7, 1996; and Keating P, "Why You May Be Getting The Wrong Medicine," *Money*, June 1997, 142-157.
[127] Op Cit, Consumers Union of U.S., Inc., "How Good Is Your Health Plan? Part One of a Two-part Report."
[128] Keating P, "Why You May Be Getting the Wrong Medicine," *Money*, June 1997, 142-57.
[129] Philp T, "Patients Protest Prescription Budgets," *Sacramento Bee*, May 23, 1997.

F. Access to Specific Types of Health Care

Reproductive Health Services

Nationally, 81% of HMOs offer some direct access to obstetrician-gynecologists either by permitting selection of an obstetrician-gynecologists as a PCP or by allowing limited self referral to these specialists.[130] In addition, according to the Alan Guttmacher Institute, HMOs nationally offer considerably more comprehensive coverage of the range of reproductive health services than does traditional indemnity insurance.[131] For example, 99% of HMOs routinely cover annual gynecological exams compared to 88% of POS, 64% of PPOs, and 49% of indemnity. Similarly, virtually all HMOs and POS cover routine mammograms compared to 80% of PPOs and indemnity.

Mental Health

The impact of managed care on access to mental health services is mixed as is the impact on access to services generally. Lower costs for mental health services have increased access for some, but stricter limitations on benefits have decreased access as well. Some HMOs have lower copayments or fewer limits on mental health than PPO/indemnity plans. For example, HMO mental health benefits in CalPERS are more generous than their PPO competitor. Some, however, have criticized managed mental health plans for limiting approvals to care, using non-psychiatric personnel to approve care, and using less costly providers and treatments which they allege may harm the quality of care.[132]

IV. IMPACT OF MANAGED CARE ON COST

A. Cost of Insurance

Driven by purchasers, competition and threat of legislation, managed care has slowed the rise in health insurance costs. In a recent study, the Congressional Budget Office (CBO) suggested that the steady shift of workers from indemnity plans to various forms of managed care plans and the consequent increase in competition in the health insurance market is a major factor in cutting employers' health care costs.[133] Nationally, costs of employer-sponsored premiums increased by 11.5% overall in 1991. Increases fell steadily to a 0.5% increase in 1996, with a slight upturn in 1997 to a 2.1% increase, about the rate of inflation.[134] Recent reports suggest that premium prices are expected to increase more in 1998, though less so in California than elsewhere.[135]

According to HMO self-reported data, average premiums in California increased for families by 17.3% and 6.6% for individuals in 1992.[136] Since then, premiums have increased at a much lower

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[130] California law, (AB 2493, 1994, Chapter 759) requires plans to offer obstectrician-gynecologists as PCPs if they meet certain criteria.

[131] Gold R, Richards C, "Improving the Fit: Reproductive Health Services in Managed Care Settings," The Alan Guttmacher Institute, New York, NY and Washington, DC, 1996.

[132] Op Cit, Boyle P and Callahan D, "Managed Care and Mental Health: The Ethical Issues."

[133] Congressional Budget Office, "Trends in Health Care Spending by the Private Sector," April 1997.

[134] *Health Benefits in 1997*, KPMG Peat Marwick LLP, October 1996, Tysons Corner, VA.

[135] Kilborn P, "Analysts Expect Health Premiums to Rise Sharply," *The New York Times*, October 19, 1997, A1.

[136] Premiums are weighted by HMO size. California to national comparison does not account for differences in benefits packages, however, year to year changes provide some historical adjustment. Hoechst Marion Roussel, *HMO-PPO Digest*, 1992-1997.

rate or decreased through 1996. Since 1992, year-to-year changes in average premiums have been better than the national average (See Figure 1). In addition, with increased managed care enrollment, all sectors in California for which data is available also show reductions in the rate of premium growth. As of 1995, more than 40% of insured Californians were enrolled in HMOs, the fourth highest penetration in the country.[137]

Figure 1. Percent Change in Average Premiums, CA and US, (1991-1996)

	Percent Change in CA			Percent Change in US		
Year	**Family**	**Individual**	**Ind&Spouse**	**Family**	**Individual**	**Ind&Spouse**
1991-92	17.3%	6.6%	N/A	9.2%	5.8%	N/A
1992-93	4.9%	5.9%	1.7%	6.2%	6.1%	5.4%
1993-94	-0.6%	-0.4%	0.7%	4.6%	3.6%	3.0%
1994-95	3.4%	0.0%	-2.8%	8.4%	3.6%	3.3%
1995-96	-4.4%	-3.0%	-5.6%	1.9%	2.5%	0.0%

Source: Hoechst Marion Roussel, Inc., *HMO-PPO Digest*, 1992-1997.

Large purchasers

For large purchasers, net reductions in weighted average premiums since 1993 range between 1% and 20% before inflation, and managed care penetrations range between 57% and 100% (See Figures 2 and 3). Weighted average premium reductions translate into substantial savings. For example, CalPERS premiums doubled from 1987 to 1992. In 1991, the State had a fiscal crisis and froze its maximum contribution. At the same time, CalPERS demanded premium reductions, with threats to freeze membership in the health plan or drop it altogether. From 1992 to 1997, CalPERS premiums were approximately flat. If instead premiums had continued at the rate of growth of average US premiums, the 10 states with the lowest managed care penetration, or if premiums had continued at the pace they experienced during the five years prior to 1992, public employees and taxpayers would have paid substantially more. Under these assumptions respectively, cost avoidance was $570, $1,215, or $2,685 per employee or $250 million, $530 million, or $1.2 billion in 1996 alone.[138]

Figure 2. California Weighted Average Health Care Premiums (1992-1998)

	Percent Change in Weighted Average Total Premiums					
Purchaser	**97-98**	**96-97**	**95-96**	**94-95**	**93-94**	**92-93**
CalPERS	3.20%	-0.80%	-4.00%	-1.10%	1.40%	6.10%
CalPERS (HMO only)	2.70%	-1.40%	-5.30%	-0.70%	-0.40%	6.90%
FEHBP (HMO only)	N/A	-2.83%	-9.30%	-5.81%	2.91%	6.13%
PBGH[139]	1.00%	0.00%	-4.30%	-9.20%	N/A	N/A
Stanford (b)	N/A	-1.82%	-4.99%	-6.16%	5.21%	8.54%

[137] Hoechst Marion Roussel, *HMO-PPO Digest*, 1996.
[138] Calculation assumes 436,704 prime lives as of April 1997.
[139] Robinson J, "Health Care Purchasing and Market Changes in CA," *Health Affairs*, 14:4, Winter 1995, 117-130.

UC (b)	N/A	-1.73%	-2.51%	-9.96%	-6.33%	1.92%
HIPC	3.87%	0.81%	-2.81%	-3.65%	N/A	N/A
HIPC (HMO only)	3.30%	-0.22%	-3.39%	N/A	N/A	N/A

N/A = Information not available.
b = Excludes one catastrophic plans.

Figure 3: Proportion of Enrollees in HMO/POS, 1996

Purchaser	Enrollees in HMO/POS	Percent in HMO/POS	1995-1996 % Increase for HMO/POS
California[140]	13,393,100 (a)	42.40%	10.53%
CalPERS	810,110	80.79%	0.24%
FEHBP (CA)	493,075	57.41%	3.13%
PBGH (b)	350,000	75.40%	9.28%
Stanford (est.)	25,000	100.00%	0.00%
UC (est.)	266,360	93.46%	3.63%
HIPC	126,692	98.80%	4.36%

a = 1995; b = negotiating alliance only.

Small Purchasers

In the small group market, HIPC rates have also declined since 1993, though its rates have increased in the last two years. In order for health plans serving the small group market to be competitive, their rates must follow the HIPC, so one may assume similar experience across the small group market. Rates in the individual market are not documented in summary form.

Higher Managed Care Penetration Associated with Savings

According to an American Association of Health Plans-commissioned study, utilization review (i.e., case reviews of medical necessity issues), utilization management (i.e., incentive structures and other measures used to promote efficiency and quality), and provider discounts reduce managed care plan costs compared to traditional indemnity (See Figure 4).[141]

Figure 4: Managed Care Health Plan Savings Relative to Indemnity Plans

	Utilization Review	Utilization Management	Discounts	Total Savings
Staff & Group HMOs	4%	18%	8%	30%
IPA HMOs	4%	4%	15%	23%
POS/PPOs	4%	4%	6%	14%
Managed indemnity (with utilization controls)	4%	–	–	4%

[140] Hoechst Marion Roussel, *HMO-PPO Digest*, 1996.
[141] Health Economics Practice, Barents Group, LLC, *The Effects of Legislation Affecting Managed Care on Health Plan Costs*, Prepared for The American Association of Health Plans, May 5, 1997, Washington, D.C.

Source: Congressional Budget Office, Lewin-VHI, Barents Group LLC

This and other studies suggest that much of the slow down in health care cost growth in California as elsewhere is attributable to the continued expansion of managed care enrollment.

National Comparison

The higher penetration of managed care enrollees in California has resulted in lower premium increases in California than the US as a whole, as reflected in Figure 1 above. Using the Federal Employees Health Benefits Program which offers employees a relatively standardized benefits package nationwide, one can compare more precisely national HMO rates to California HMO rates. In comparing the weighted average individual monthly premiums, FEHBP HMO rates in California have declined more than the national average since 1994 (See Figure 5).

Figure 5: Health Care Marketplace Comparison: CA & US FEHBP HMO Weighted Average Individual Monthly Premiums and HMO Enrollment, 1997

	1997 WA Ind Monthly Premiums	**% of Pop in HMOs 1997**	**% Chg 96-97**	**% Chg 95-96**	**% Chg 94-95**	**% Chg 93-94**	**% Chg 92-93**
California	$158.25	57.41%	-2.16%	-3.94%	-7.25%	4.65%	7.33%
US average	$168.06	29.35%	1.08%	-1.93%	-3.85%	4.19%	8.11%

Impact of Savings on the Economy

A 1997 study by The Lewin Group estimated the amount of savings resulting from managed care.[142] Based on their own and more conservative CBO assumptions, the Lewin Group found that total national savings attributable to managed care in 1996 was between $23.8 and $37.4 billion. Total savings over the 1990 to 1996 period were between $116 and $181 billion. For California, savings in 1996 were between $5.5 and $8.6 billion or between 15% and 23% of total premiums. Total savings over the 1990 to 1996 period were between $28.4 and $44.3 billion.

According to the Lewin study, the reduction in health care costs due to managed care increased wage levels for covered workers above what wages would have been in the absence of managed care. The national average wage gain due to managed care savings for covered workers in 1996 was between $228 and $356, or between 0.7% and 1.0%. The average amount saved by households through managed care varied from $191 to $252 to per single individual, $408 to $549 per married couple, and $375 to $500 per family.

B. Underlying Cost Structure

Information about the cost structure underlying insurance premiums suggests that California generally has a lower cost structure than the nation on average, including fewer hospital beds (though measurement of licensed beds potentially miss greater reductions in operating beds) and

[142] Sheils J and Haught R, "Managed Care Savings for Employers and Households: 1990 through 2000," The Lewin Group, prepared for the American Association of Health Plans, May 23, 1997.

fewer hospital days per 1000 members (See Figure 6). While California has slightly more physicians per 100,000 population than the national average, this number has been increasing at a slower rate.

Variations in utilization of hospital days and visits among California medical groups may suggest continued room for improvement (See Figure 6). According to medical group data, the least efficient medical group typically uses twice the resources of the most efficient medical group. Improvement in the least efficient groups could reduce costs considerably. Further improvement, however, may not be easy. Efforts such as fall prevention and disease management require sophisticated team-based care management that is not well-developed in all HMO model types.

Figure 6: Health System Utilization Statistics, California versus US

	CA	% Change per Year Since 1990	US	% Change per Year Since 1990
AHA (1996)[143]				
Short Stay Hospital Days/1000	523	(3.20%)	765	(2.84%)
Hospital Beds/1000	2.39	(2.18%)	3.34	(1.87%)
Medicare (1993)[144]				
Short Stay Hospital Days/1000	1,656	(4.76%)	2,503	(3.50%)
AMA (1995)[145]				
Physicians/100,000	275	0.22%	264	2.35%
Percent Primary Care (a)	38.53%	N/A	38.77%	N/A
Physician Graduates /1000	324 (b)	(8.21%) (c)	605 (b)	(7.16%) (c)
UMGA versus US (1995)[146]				
Adjusted total days/1000				
Commercial Days/1,000				
Average Medical Group	151	(7.99%) (d)	258.4 (e)	(5.31%)
Most Efficient Medical Group	96	(1.78%)	N/A	N/A
Least Efficient Medical Group	201	(16.22%)	N/A	N/A
Senior Days/1,000				
Average Medical Group	1066	(4.11%) (d)	1577.7 (e)	(0.63%) (f)
Most Efficient Medical Group	839	(2.72%)	N/A	N/A
Least Efficient Medical Group	1623	(6.31%)	N/A	N/A
Visits per member per month				

[143] American Hospital Association, *1996 AHA Hospital Statistics*
[144] *Health Care Financing Review, Medicare and Medicaid Statistical Supplement* (1992, 1994 and 1995).
[145] American Medical Association, *Physician Characteristics and Distribution in the US* (1996-97).
[146] Unified Medical Group Association (now American Group Practice Association), data for California, and Hoechst Marion Roussel, *HMO-PPO Digest*, 1996, for national data.

Figure 6 (Cont.): Health System Utilization Statistics, California versus US

	CA	% Change per Year Since 1990	US	% Change Per Year Since 1990
Commercial Visits				
Average Medical Group	3.84	(1.91%)	3.5	1.18%
Most Efficient Medical Group	2.25	7.19%	N/A	N/A
Least Efficient Medical Group	5.56	(3.46%)	N/A	N/A
Senior Visits				
Average Medical Group	8.54	(1.56%)	8.1	4.50%
Most Efficient Medical Group	6.01	4.77%	N/A	N/A
Least Efficient Medical Group	13.60	(2.11%)	N/A	N/A

N/A: Not Available
a = Primary care includes family practice, general practice, internal medicine, obstetrics/ gynecology, and pediatrics.
b = 1990-1995 average.
c = Percent change between 1990-1995 and 1980-1989 averages.
d = For California, total days include acute, skilled nursing and psychiatric facilities. Days are not adjusted for demographic characteristics, such as age (other than senior versus non-senior), sex or risk.
e = For national data, hospital days include acute hospital days only.
f = Note: The 1995 value represents a 6.20% decrease from 1994.

C. Non-Economic Costs

Managed care may also impact important non-economic factors such as uncompensated care and emerging clinical research which should also be considered in an evaluation of impact on costs. However, no empirical evidence is available in these areas.

Uncompensated Care

Blumenthal, in a discussion of effects of market reforms, suggests that the "commodification" of the physician-patient relationship "will lead to a decline in physicians' altruism and, particularly, reduced willingness to provide free care to uninsured and poor patients...Pro-market policy analysts who ignore this potential effect of competition are in danger of losing touch with the average citizen."[147]

Clinical Research

A Lewin-VHI study commissioned by the Department of Health and Human Services and the National Institutes of Health found that increased managed care penetration "has had a limited impact on clinical research to date, but that economic forces facing academic medical centers may substantially affect future clinical research" (see Task Force paper on Academic Medical Centers).[148] Reductions in coverage for diagnostic procedures, denials for experimental treatment, and reduced patient flow are some of the variables that fuel these concerns.

[147] Blumenthal D, "Effects of Market Reforms on Doctors and Their Patients," *Health Affairs*, 15:2, Summer 1996, 171-184.
[148] Mechanic R, Dobson A, Yu S, "The Impact of Managed Care on Clinical Research," Lewin-VHI, Inc., January, 1996.